

REMARKS

Claims 24-33, 35 and 38-44 are pending and rejected in this application. Claims 24, 43 and 44 are amended; and claim 46 is added hereby. Claim 46 has been added using elements of claim 24 and additional details from the specification without the addition of new matter.

Responsive to the rejection of claims 24-33, 35 and 38-44 under 35 U.S.C. § 112, second paragraph, Applicants have amended claim 24 and 43, and submits that claims 24-33, 35 and 38-44 are now in condition for allowance.

Claim 24 has been amended to incorporate changes to the enclosing step, as suggested by the Examiner. For the foregoing reasons, Applicants submit that claim 24, and claims 25-33, 35 and 38-44 depending therefrom, are now in condition for allowance, the allowance of which is hereby respectfully requested.

Regarding claims 43 and 44, the Examiner has indicated that it is confusing as to how a paper web can be paper or cardboard without changing the scope, and in answer, Applicants respectfully direct the Examiner's attention to <http://www.paperonweb.com/dict11.htm>. At this website the definition of paper is "a homogenous sheet formed by a regularly intervening cellulosic fibers." The definition of cardboard is, "a thin, stiff paperboard made of pressed paper pulp or sheets of paper pasted together." The definition of paperboard is, "a heavy weight, thick, rigid and single or multi-layer sheet ... paper heavier than 150 g/m² are normally called paperboard, and paperboard heavier than 500 g/m² are called board." As can be seen paper is a very broad term and cardboard is defined as a particular version of paper, particularly paperboard. As such the definition of a paper web as being one of paper or cardboard is within the scope of the definitions. Nonetheless, Applicants have amended claim 43 to indicate that a paper web includes paper and cardboard. Accordingly, Applicants submit that claims 43 and 44 are in condition for allowance, which is hereby respectfully requested.

Responsive to the rejection of claims 24-33, 38, 39 and 41-44 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 4,230,743 (Nakamura et al.) in view of U.S. Patent No. 5,206,057 (Finnicum, et al.), Applicants have amended claim 24 and submit that claims 24-33, 38, 39 and 41-44 are now in condition for allowance.

Nakamura et al. disclose a process for producing pressure sensitive copying paper (Figs. 3 and 4) using a coating solution 1 containing microcapsules as a main component. A wind shielding plate 11 is placed upstream of the contact area so that the free fall of the material reaches web 9 without being disturbed (column 4, lines 8-55). The coating apparatus shown in Fig. 4 has a first coating apparatus and a second coating apparatus positioned subsequent to the first coating apparatus in the direction of flow of web 9. Web 9 goes through a first curtain and a second curtain flow as it proceeds in the direction of the arrow shown on web 9 of Fig. 4. The second coating layer is formed on the first coating layer while the first coating layer is in an undried state (column 7, lines 1-50).

Finnicum et al. show a device for applying a curtain coating for photographic film in which a multi-layer material passes through slots 14 and is dropped onto a web by gravity. The curtain 17 is bounded by sidewalls 19, 20 and a lateral wall 21. A valve mechanism permits a fluid to pressurize the space between the curtain 17 and the perimeter walls via a conduit 22 and valve 23 in order to control where on the arc of the web the curtain 17 impinges. There is a space between the web and the walls (column 3, lines 20-52).

In contrast, claim 24 as amended recites in part:

enclosing said space partially bounded by said first curtain and said second curtain using said first curtain applicator unit, said second curtain applicator unit, the application medium curtains coming from said first curtain applicator unit and said second curtain applicator unit, the paper web and a suction/blower box; and

enhancing the wetting of said curtain medium from said second curtain to said medium from said first curtain on the web by providing a negative pressure in said space.

(Emphasis added). Applicants submit that such an invention is neither taught, disclosed nor suggested by Nakamura et al., Finnicum et al. or any of the other cited references, alone or in combination and includes distinct advantages thereover.

Nakamura et al. disclose a process for producing pressure sensitive copying paper including a coating solution that contains micro-capsules as a main component. Finnicum et al. disclose a device for applying a curtain coating for photographic film in which a multi-layer material passes through slots and is dropped onto a web by gravity. Neither of the references teach the enclosing of a space, which is bounded by the elements described in amended claim 24, since Nakamura et al. is obviously open, and Finnicum et al. discloses the existence of a space between the web and the walls. Further, neither of the references teach the enhancement of wetting of the curtain mediums by providing a negative pressure in the space that is bounded by the curtains. Applicant's invention is taught away from by Finnicum et al. in that the wall precludes the enhancement step brought about by the interaction of the space and the two application mediums. Therefore, Nakamura et al., Finnicum et al. and any of the other cited references, alone or in combination fail to disclose, teach or suggest the steps of enclosing the space partially bounded by the first curtain and the second curtain using the first curtain applicator and the second curtain applicator unit, the application medium curtains coming from the first curtain applicator unit and the second curtain applicator unit, the paper web and a suction/blower box, and the enhancing of the wetting of the curtain medium from the second curtain to the medium from the first curtain on the web by providing a negative pressure in the space, as recited in claim 24.

Applicants' invention has distinct advantages in that the combination of the elements of enclosing the space so that the pressure therein can be utilized to effect the coating characteristic, and more particularly the application of a negative pressure in the space to enhance the wetting of

the coating. Further, if a vacuum is produced in the pressure control space, the separation of the first application medium curtain from a guide doctor is positively influenced. For all of the forgoing reasons, Applicants submit that claim 24, and claims 25-33, 38, 39 and 41-44 depending therefrom, are now in condition for allowance, which is hereby respectfully requested.

Claim 35 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Nakamura et al. in view of Finnicum et al. and in further view of U.S. Patent No. 5,192,592 (Shay). However, claim 35 depends from claim 24 and claim 24 is now in condition for allowance for the reasons given above. Accordingly, Applicants submit that claim 35 is now in condition for allowance, which is hereby respectfully requested.

Claim 40 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Nakamura et al. in view of Finnicum et al. and in further view of U.S. Patent No. 5,136,970 (Saito et al.). However, claim 40 depends from claim 24, and claim 24 is now in condition for allowance for the reasons given above. Accordingly, Applications submit that claim 40 is now in condition for allowance, which is hereby respectfully requested.

For the foregoing reasons, Applicants submit that the pending claims are definite and do particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Moreover, Applicants submit that no combination of the cited references teaches, discloses or suggests the subject matter of the amended claims. The pending claims are therefore in condition for allowance, and Applicants respectfully request withdrawal of all rejections and allowance of the claims.

Applicants hereby inform the Examiner that the corresponding European application (EP 1 208 917 B1) was granted on Feb. 27, 2008.

In the event Applicants have overlooked the need for an extension of time, an additional extension of time, payment of fee, or additional payment of fee, Applicants hereby conditionally

petition therefor and authorizes that any charges be made to Deposit Account No. 20-0095,
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Should any question concerning any of the foregoing arise, the Examiner is invited to
telephone the undersigned at (260) 897-3400.

Respectfully submitted,

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